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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,515	12/13/2001	Svyatoslav Ivanovich Arsenich	34846-PCT-USA (072170.010)	8681
21003	7590	01/06/2005	EXAMINER CHANG, AUDREY Y	
BAKER & BOTTS 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			ART UNIT 2872	PAPER NUMBER

DATE MAILED: 01/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/019,515

Applicant(s)

ARSENICH, SVYATOSLAV
IVANOVICH

Examiner

Audrey Y. Chang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 2,3 and 6-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Remark

- This Office Action is in response to applicant's preliminary amendment filed on December 13, 2003, which has been entered into the file.
- By this amendment, the applicant has amended claims 9-10.

Election/Restrictions

1. Applicant's election of **Species E, claims 1, 4, 5, 9 and 10** in the reply filed on October 24, 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. **Claims 2-3, and 6-8 are withdrawn** from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species there being no allowable generic or linking claim. Election was made **without traverse** in the reply filed on October 4, 2004.
3. Claims 1, 4-5, and 9-10 remain pending in this application.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features concerning the single stereo-projector with a pair of telelenses and light-splitting system disclosed in **claim 5** must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being

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amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claims 1, 4, 5, 9 and 10 are objected to because of the following informalities:

(1). The phrase "on the stereoscreen a system for optically separating the left or right screen image of the stereo pair" recited in claim 1 is confusing. It is not clear how can the spherical concave mirror, which essentially is the stereoscreen has the *system* for separating the left and right screen images. The left and right image are separated because they are produced by two different stereo projectors. The spherical concave mirror does not have the function of separating images.

(2). The phrase "said system" and the phrase "the system" recited in claim 1 are confusing and indefinite since there are "stereoscopic system for viewing", "system for optically separating the left and right screen image", and "stereo-projection system", it is really not clear which system is referred in each of the cases.

(3). The phrase "a single stereo aspect for viewing" recited in claim 1 is confusing and indefinite since it is not clear what does "aspect" means. Dose it mean a view or what?

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(4). Regarding claim 9 the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

(5). The phrase "and/or" recited in claims 9 and 10 is confusing since it is not clear what is the scopes of the claims. The "geometrical errors, half-tone and color filters" recited in claim 9 are not equivalent to each other it is therefore not clear what is considered to be the scopes of the claim. The alternative phrase in claim 10 makes the scope of the claim very unclear, it is not clear if each of the cases recited is or is not part of the limitations.

Applicant is **respectfully required** to correct all of the errors and confusions in the claims to make the claims in comply with the requirements of 35 USC 112, first and second paragraphs. The claims as stand now are narrative and contains terms that are not logically connected.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1, 4, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Walker et al (PN. 5,908,300) in view of the patent issued to Richards (PN. 5,671,992).**

Walker et al teaches a *stereoscopic image display* that is comprised of a *pair of stereoscopic projectors* (CRT A and CRT B) including *projection lenses* (A and B, Figure 4), for projecting stereo pair of left and right eye images onto a *spherical concave reflector* (54) that serves as the *stereoscreen*. The spherical concave reflector directs and forms the left and right eye image projected from the stereo projectors to left and right eye of an spectator to enable stereoscopic viewing. The right and left eye

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stereo pair images are stereoscopically related to provide a single stereoscopic view that serves as a stereo aspect.

This reference has met all the limitations of the claims with the exception that it does not teach explicitly to have an automatic corrector with actuators connecting to the projection lenses to shift the lenses in corresponding to the locations of the eyes. **Richards** in the same field of endeavor teaches a stereoscopic unit wherein an *eye tracking module*, serve as the *sensor*, (24, Figure 1) is used to tracking the eyes of the observer and a *carriage*, serves as the *actuator*, (50, Figure 3) is connected to the projectors (14 and 16) to control the positions of the projectors, which implicitly connected to the projection lenses of the projectors according to the signal obtained by the eye tracking module. It would then have been obvious to one skilled in the art to apply the teachings of **Richards** to modify the stereoscopic image display of **Walker et al** to provide the eye tracking module and the actuator for correcting the positions of the projectors with the projection lenses for the benefit of accommodating the motion of the observer to ensure accurate stereoscopic image viewing.

Although these references do not teach explicitly about a number of stereo pairs and a number of stereo projectors are sued to provide a number of stereoscopic views for a number of spectators however such modification is obvious to one skilled in the art since the stereoscopic image display arrangement does not limit to a single viewing and the same principle will work for other sets of stereo projectors for other viewers.

With regard to claim 4, the stereoscreen is a *spherical curved reflector* with center of radius of curvature located at the side of the observer, and the symmetry of the projected stereo image pairs with respect to the observer is implicitly included in order for the images to be directed to the correct eyes respectively.

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With regard to claim 9, it is implicitly true that the projection lenses include elements for correcting the geometrical errors for making the image properly formed, (i.e. with the correct aspect ratio so that the image is not distorted).

With regard to claim 10, the stereo pair of the images are projected on the central part of the stereoscreen.

8. **Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the patents issued to Walker et al and Richards as applied to claims 1 and 4 above, and further in view of the patent issued to Yano et al (PN. 4,078,854).**

The stereoscopic image display taught by **Walker et al** in combination with the teachings of **Richards** as described for claims 1 and 4 above have met all the limitations of the claim. **Walker et al** teaches that the stereo pair images are provided by a pair of stereo projectors but does not teach explicitly that the stereo pair may also be provided by a single stereo projector with lenses and light splitting system. **Yano** in the same field of endeavor teaches a stereoscopic image projection system wherein the stereo pair of images (62-1-2, Figure 6) is projected by a single projector (61) and being separated by a light splitting system (63 and 64). It would then have been obvious to one skilled in the art to apply the teachings of **Yano et al** to modify the stereoscopic image display of **Walker et al** by using a single projector for the benefit of reducing the elements needed for the stereoscopic image display to save the cost.

Contact Information

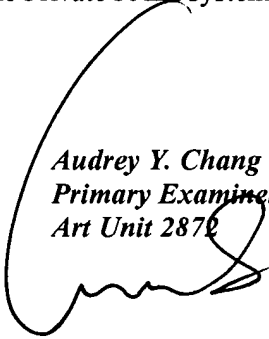
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Audrey Y. Chang whose telephone number is 571-272-2309. The examiner can normally be reached on Monday-Friday (8:00-4:30), alternative Mondays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Audrey Y. Chang
Primary Examiner
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A. Chang, Ph.D.